

**To:** Whom It May Concern

**From:** Laura Annetta, MPH Candidate

**Date:** 6 May 2009

**Subject:** Public Comment on Mandatory Reporting of Greenhouse Gases, Proposed Rule, Docket EPA-HQ-OAR-2008-0508

I support the EPA's proposed rule of mandatory reporting of greenhouse gases (GHG). While I agree with the current provisions, the EPA needs to do more to regulate the emissions of greenhouse gases, particularly because of its effects on human health. The EPA should not wait to determine the amount of GHGs being emitted before regulating them. One of the main drivers of climate change is the atmospheric concentrations of GHGs<sup>i</sup>. The EPA should simultaneously propose a rule to regulate GHGs, and that process should begin now.

GHGs contribute to global climate change, and on page 16454 of FR Vol. 74, No 68, the proposed rule states that "overall risk to human health, society and the environment increases with increases in both the rate and magnitude of climate change." Furthermore, on page 16465, the proposed rule states "Regulations targeting black carbon emissions or ozone precursors would have combined benefits for public health and climate". The proposed rule goes on to say that "This action is not subject to EO13045 because it does not establish an environmental standard intended to mitigate health or safety risks." While the mandatory reporting of GHGs does not establish a standard and therefore does not directly mitigate health risks, I feel support for this measure is necessary as it paves the way for regulation in the future which would help to protect the public's health.

#### Public Health Implications

Recently, in April 2009, the EPA formally declared that carbon dioxide and five other heat-trapping gases are pollutants that endanger public health and welfare<sup>ii</sup>. EPA Administrator Lisa P. Jackson stated "This finding confirms that greenhouse gas pollution is a serious problem now and for future generations"<sup>iii</sup>. While mandatory reporting will not do anything directly to affect public health, it is an important first step in protecting the public's health from global climate change by laying the groundwork for further action. Global climate change may lead to the displacement of persons due to rising sea levels, changing weather patterns, drought, loss of drinking water, changes in patterns of disease, agricultural problems, and so much more, all of which we face here in the United States. For example, sea level is likely to rise 18-20 inches in Florida by 2100<sup>iv</sup>. This may cause loss of land, loss of structures, loss of wildlife habitat, accelerated coastal erosion, exacerbated flooding and increased vulnerability to storm damage. Additionally, it would threaten fresh water supplies. Effects such as these may occur all over the U.S. coast.

According to the World Health Organization, there are many health implications potentially associated with global climate change<sup>v</sup>. Hot and cold extremes due to weather fluctuations may cause potentially fatal illnesses, such as heat stress and hypothermia, as well as deaths from heart and respiratory diseases. Extreme fluctuations in temperature increase both morbidity and mortality<sup>vi</sup>. Smog episodes may increase when warm air and pollutants are trapped due to stagnant weather conditions<sup>vii</sup>. Heat waves will be increased -- the potential effects were demonstrated in the summer of 2003 in Europe. That summer, high temperatures were associated with at least 27,000 more deaths than the previous year<sup>viii</sup>. Higher temperatures due to climate change may compromise the freshwater supply, such as Florida's drinking water<sup>ix</sup>, and increase the risk of water-borne disease. The combination of higher temperatures and variable precipitation will increase the risk of malnutrition because the production of staple foods in poor regions is likely to decrease<sup>x</sup>. Coastal flooding will increase along with rising sea levels, which will lead to population displacement. Climate change will also likely make the transmission seasons of vector-borne diseases longer and alter their geographic range. This may bring the diseases to areas where they have traditionally not been found and locally there is no population immunity and/or a public health infrastructure with knowledge and experience in those diseases. Through even just a few of the possible public health impacts, the WHO estimates that warming and precipitation trends due to human impacts on climate change over the past 30 years has already claimed over 150,000 lives annually<sup>xi xii</sup>.

According to the Intergovernmental Panel on Climate Change (IPCC), warming mountains in the west are expected to cause decreased snow pack, more winter flooding, reduced summer flow, and stressed water resources<sup>xiii</sup>. Crops that are already near the warm end of their suitable range or that depend on already highly utilized water resources that may also be threatened. The IPCC expects that there will be an increase in number, intensity, and duration of heat waves which may cause adverse agricultural and health conditions.

By requiring that GHG emissions be reported, EPA and other scientists will gain a more accurate understanding of how much the United States is polluting our air, contributing to climate change, and therefore harming public health. Based on this information, scientists will be able to determine how much corrective action will be required. It will also set the stage for future regulation of GHGs. Once caps are put on allowable GHG emissions, this may slow down many of the public health affects that our nation faces. Also, the reporting of GHGs will bring awareness to the issue. There reports should be made public, which will pressure companies to reduce the amount of GHGs they emit even without regulation since it would be unfavorable publicity for a company to be at the top of the list of GHG polluters. Still, it would be wise of the EPA to begin regulation under the Clean Air Act now, and to use the reports to then adjust maximum allowable levels.

Comment on the inclusion of water vapor and chlorofluorocarbons (CFCs) from the mandatory reporting

In reference to the solicitation of comments about the inclusion of water vapor in the mandatory reporting, I would oppose water vapor being included on the list of reportable GHGs. While the National Oceanic and Atmospheric Administration (NOAA) states that water vapor is the most abundant GHG, there is a climate feedback loop that is related to the warming of the atmosphere more than water vapor due to industry is<sup>xiv</sup>. The IPCC Guidelines do not include water vapor because man-made water vapor does not contribute largely to the change of atmospheric water vapor concentration in a significant amount<sup>xv</sup>. The EPA should consider following the IPCC Guidelines.

In reference to the solicitation of comments regarding the inclusion of CFCs in the mandatory reporting, the EPA should consider including them. After the final rule in 1992 to implement section 604 of the Clean Air Act, CFCs were to be completely phased out of production by 1 January 2000<sup>xvi</sup>. While they can still be used in certain circumstances, the detection of a significant amount of CFCs may indicate an illegal use. The mandatory reporting of CFCs would ensure that the 1992 rule was in fact in effect and followed.

### Leadership Role for the U.S.

The U.S. is a leader in promoting public health. In 1987, the U.S. played a leading role in negotiating the Montreal Protocol and ratification by the U.S. encouraged action by other nations<sup>xvii</sup>. In this way, the U.S. was a leader early on in the struggle against public health effects due to stratospheric ozone depletion, but the U.S. has done little since to show its commitment to combat the potentially much greater issue of global climate change. It is important that the U.S. reaffirms its dedication to combating global climate change while showing support for improving public health globally. The fact that scientists cannot agree on the exact effects of climate change on health is not an excuse for not taking action. It is appropriate to note Senator Kerry's words regarding climate change "We here in Washington must realize that the world is taking its cues from us... Without a clear signal from Congress on the scope, format, and ambition of our domestic program, our negotiators will lack the leverage to secure the participation of all major contributors to climate change. Ultimately, the strength of our domestic policy will be a critical factor in galvanizing the world to enter into a global agreement."<sup>xviii</sup>

Sincerely,

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<sup>i</sup> International Panel on Climate Change. *Climate Change 2007: Synthesis Report*. <http://www.ipcc.ch/ipccreports/ar4-syr.htm>

<sup>ii</sup> Broder, John M. "E.P.A Clears Way for Greenhouse Gas Rule". *New York Times*. 17 April 2009. [http://www.nytimes.com/2009/04/18/science/earth/18endanger.html?\\_r=1&scp=2&sq=Greenhouse%20Gases&st=cse](http://www.nytimes.com/2009/04/18/science/earth/18endanger.html?_r=1&scp=2&sq=Greenhouse%20Gases&st=cse)

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- <sup>iv</sup> Environmental Protection Agency. *Climate Change and Florida*. September 1997.
- <sup>v</sup> World Health Organization. *Climate and Health Fact Sheet*.  
<http://www.who.int/globalchange/news/fsclimandhealth/en/print.html>. July 2005
- <sup>vi</sup> Patz, Jonathan A, et al. *Impact of regional climate change on human health*. *Nature*. Vol 438. 17 November 2005.
- <sup>vii</sup> World Health Organization. *Climate and Health Fact Sheet*.  
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- <sup>viii</sup> World Health Organization. *Climate and Health Fact Sheet*.  
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- <sup>ix</sup> Loder, Asjylyn. "Climate change threatens Florida's drinking water supply". St. Petersburg Times. 9 November 2008. <http://www.tampabay.com/news/business/energy/article895015.ece>
- <sup>x</sup> World Health Organization. *Climate and Health Fact Sheet*.  
<http://www.who.int/globalchange/news/fsclimandhealth/en/print.html>. July 2005
- <sup>xi</sup> World Health Organization. *Climate and Health Fact Sheet*.  
<http://www.who.int/globalchange/news/fsclimandhealth/en/print.html>. July 2005
- <sup>xii</sup> Patz, Jonathan A, et al. *Impact of regional climate change on human health*. *Nature*. Vol 438. 17 November 2005.
- <sup>xiii</sup> International Panel on Climate Change. *Climate Change 2007: Synthesis Report*.  
<http://www.ipcc.ch/ipccreports/ar4-syr.htm>
- <sup>xiv</sup> National Oceanic and Atmospheric Administration. *Greenhouse Gases Frequently Asked Questions*.  
<http://lwf.ncdc.noaa.gov/oa/climate/gases.html>. (updated 20 August 2008)
- <sup>xv</sup> International Governmental Panel on Climate Change. *Frequently Asked Questions*. <http://www.ipcc-nggip.iges.or.jp/faq/faq.html>. (5 June 2008).
- <sup>xvi</sup> Environmental Protection Agency. "The Accelerated Phaseout of Class 1 Ozone-Depleting Substances".  
<http://www.epa.gov/Ozone/title6/phaseout/accfact.html>. (updated 14 April 2009)
- <sup>xvii</sup> Environmental Protection Agency. President Reagan on Montreal Protocol Ratification.  
<http://www.epa.gov/history/topics/montreal/01.htm>. (updated 21 September 2007).
- <sup>xviii</sup> Rhee, Foon. "Kerry Says clock ticking on climate change deal". The Boston Globe. 22 April 2009.  
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